

PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional) SC12116ZP	
Certificate of Transmission under 37 CFR 1.8 I hereby certify that this correspondence is being _____ facsimile transmitted or <u> X </u> e-filed to the United States Patent and Trademark Office - Mail Stop AF. on <u> April 9, 2008 </u> Signature _____ Typed or printed name: Dee Matocha	Application Number 10/730230 First Named Inventor BISHNU P. GOGOI Art Unit 2823	Filed December 8, 2003 Examiner MICHELLE ESTRADA	
Applicant request review of the final rejection in the above identified application. No amendments are being filed with this request. This request is being filed with a notice of appeal. The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided. I am the <input type="checkbox"/> applicant/inventor. <input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96) <input checked="" type="checkbox"/> attorney or agent of record. Registration number: 50,714 <input type="checkbox"/> attorney or agent acting under 37 CFR 1.34 Registration number if acting under 37 CFR 1.34 _____			
		_____ /Kim-Marie Vo/ Signature Kim-Marie Vo Typed or printed name (512) 996-6839 Telephone number _____ April 9, 2008 Date	
NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.			

☒ *Total of 1 forms are submitted

The collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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REMARKS

Claims 1-12, 14-17, and 19-25 are pending. Claim 23 is allowable and claims 12 is objected to because it depends on rejected claim 1. All other claims are rejected and/or objected to. In addition, the Examiner objected to the drawings.

Drawings Objections

The Examiner contends the drawings do not show three features: 1) a gap formed between the semiconductor substrate and layer, as stated in claim 1; 2) etching the layer to expose a portion of the sacrificial layer, as stated in claim 14; and 3) removing the sacrificial layer to form a gap, as stated in claim 14. Applicants submit that no new drawings are needed because these features are illustrated in Figures 10-12.

- 1) With respect to the first feature, FIGs. 11 and 12 illustrate a gap 50 formed between the semiconductor substrate 12 and a layer 48.
- 2) With respect to the second feature, in FIG. 11, layer 48 is etched (forming holes 43) to expose a portion of the sacrificial layer 46 (which is also removed in FIG. 11.) See paragraph 42 for an explanation of the processing that results in FIG. 11.
- 2) With respect to the third feature, FIG. 11 also illustrates removing the sacrificial layer(s) 46 and 40 to form gaps 50.

Hence, the three features the Examiner contends need to be illustrated in the drawings, already are illustrated in the existing drawings.

Claim Rejections

Claims 1-12 are patentable under 35 U.S.C. 112.

The Examiner contends that there is no description in the specification as originally filed of "forming a gap between the semiconductor substrate and the layer." (This language is not verbatim in the claims, but claim 1 states, "wherein a gap is formed between the semiconductor substrate and the layer.") The Examiner contends that there is only support for an opening within the layer or through the layer. The specification repeatedly refers to the gap 50. (Note the specification does teach an opening within the layer or through the layer, which is opening 43. The opening 43 and the gap 50 are different elements.) For example, "The release etch is performed to release the seismic mass 32

by removing the first 40 and the second 46 sacrificial layers and a portion of the BOX layer 14 and forming a gap 50, as shown in FIG. 11." The gap is also described in paragraphs 45 and 46. As discussed above, the gap 50 is between the semiconductor substrate 12 and the layer 48. Hence, the application provides support for "forming a gap between the semiconductor substrate and the layer."

Claims 1, 2, 4, 9-11, 14, 15, 17, 19, 20, 24, and 25 are patentable under 35 U.S.C. 103(a) over Partridge in view of Razouk and claim 3, 5-8, 16, 21, and 22 are patentable under 103(a) over Partridge in view of Razouk, and further in view of Examiner's Official Notice.

The disagreement between the Examiner and Applicants is about whether Partridge and Razouk teach or suggest to a skilled artisan to form a gap and seal an opening to close the gap. The Examiner contends, "the same material are treated in the same manner, [in Partridge and Razouk and] therefore it would be obvious to one of ordinary skill in the art that the gap would be close [sic] off to the environment with this procedure."

Applicants disagree. Even if the same materials are used, they are not treated in the same manner as the Examiner contends. Both Partridge and Razouk teach filling trenches. In contrast, the pending claims require that a gap is created and sealed, and hence, the gap is not filled. Thus, both Partridge and Razouk teach away from creating a gap and sealing its opening because they both fill any gaps and openings (i.e., trenches). Furthermore, Razouk teaches away from forming a gap for an additional reason; Razouk teaches performing a reflow to make sure the opening is entirely filled and any voids or gaps are prevented. (See Col. 1, lines 56-62). Because the prior art is performing steps to prevent voids or gaps, the prior art is not treating materials (assuming they are the same) in the same manner. The prior art is treating the materials in a different manner to fill an opening, where Applicants' claims state that a gap is closed and an opening is sealed.

By analogy, Applicant's claims are directed to closing an empty cardboard (i.e., paper) shoebox and sealing its opening (the top of the shoebox) with a cardboard lid. The prior art instead, is teaching having a cardboard shoebox and filling it with tissue paper. Ignoring that fact that Applicants and the prior art are using two different materials (cardboard vs. tissue paper), even if we assume that all the materials are the same – paper-, Applicants and the prior art are using the paper in very different manners. One is filling the box, like the Partridge and Razouk are filling their trenches and the other is forming a gap in the box and sealing it with the lid, like Applicants features in the claims.

Partridge and Razouk teach away from sealing the shoebox to form a gap (at atmospheric pressure, as the claim require).

For at least these reasons, Partridge, Razouk, and the Examiner's Official Notice fail to teach, suggest, or motivate a skilled artisan to form a gap and seal the opening to close the gap, in the manner stated in the pending claims.

The Office Action contains numerous statements characterizing the claims, the specification, and the prior art. Regardless of whether such statements are addressed by Applicants, Applicants refuse to subscribe to any of these statements, unless expressly indicated by Applicants.